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(54) **PRODUCTION OF BAKING HARDENABILITY
HIGH STRENGTH COLD ROLLED STEEL SHEET
EXCELLENT IN WORKABILITY**

(57) Abstract:

PURPOSE: To produce a baking hardenability high strength cold rolled steel sheet excellent in workability by subjecting a cold rolled steel sheet having a specified compsn. to recrystallization continuous annealing and rapid cooling treatment under specified conditions and thereafter executing skinpass rolling.

CONSTITUTION: A slab contg., by weight, 0.070 to 0.200% C, $\leq 0.30\%$ Si, 0.50 to 1.50% Mn, $\leq 0.030\%$ P, $\leq 0.025\%$ S, 0.002 to 0.100% sol.Al and $\leq 0.012\%$ N is

subjected to hot rolling and is coiled into a hot rolled steel strip, which is thereafter subjected to cold rolling into a cold rolled steel strip. At the time of subjecting the cold rolled steel strip to recrystallization continuous annealing, it is rapidly heated in the temp. range of $\approx 500^\circ\text{C}$ at 300 to $2000^\circ\text{C}/\text{sec}$ ultrarapid heating temp., is held to 730 to 830°C for $\leq 2\text{sec}$, is thereafter rapidly cooled at least to 400°C at 100 to $500^\circ\text{C}/\text{sec}$ cooling temp. and is furthermore air-cooled to a room temp. This is subjected to skinpass rolling at 0.5 to 5.0% rolling ratio, by which the high strength cold rolled steel sheet having $\approx 60\text{kgf}/\text{mm}^2$ strength and excellent in workability can be produced.

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